

MEMORANDUM FOR: W/NP - Louis W. Uccellini
W/APO - Paul T. Nipko

FROM: W/OM - Gregory Mandt

SUBJECT: Request for NMAP Implementation at RFCs East of
the Continental Divide

On November 30, 1999, the QPF Process Implementation Working Group (IWG) convened at National Weather Service Headquarters. The goal of the QPF Process IWG is to complete the tasks specified in the Corporate Board-approved QPF Implementation Time Line. Completion of these tasks will ensure implementation by 30 September 2000 of the recommendations adopted at the August 1999 Director's Conference and the supporting recommendations outlined in the Quantitative Precipitation Forecasting (QPF) Process Assessment Team Report. IWG members include personnel from each of the four continental U.S. Regions, the National Centers for Environmental Prediction (NCEP), the Office of Hydrology (OH), the Office of Systems Development (OSD), the AWIPS Program Office (APO), and the Office of Systems Operations (OSO). The IWG is led by the Office of Meteorology (OM). As you know, IWG members are QPF experts who represent their respective directors and serve as focal points for QPF implementation activities.

While many important issues were addressed at the IWG's first meeting, the IWG focused on resolving issues and completing tasks with near-term deadlines. A significant Corporate Board issue/task with a December 2, 1999-deadline was resolved by the IWG. Specifically this task reads "Reach consensus on a standard River Forecast Center (RFC) QPF software application and format for HPC-generated QPF grids." The action was assigned jointly to Eastern Region (ER), Central Region (CR), Southern Region (SR), and the Office of Hydrology (OH).

The IWG participated in demonstrations and conducted a detailed review of the following software applications: 1) HASQPF, which is currently used at RFCs east of the Continental Divide; 2) the AWIPS Graphical Forecast Editor (GFE), which will be delivered with Build 5.0; and 3) the product generation component of the National Centers (N)-AWIPS software, NMAP, which is currently used at the Hydrometeorological Prediction Center (HPC) and other NCEP service centers.

The N-AWIPS NMAP software application was the clear consensus choice.

It was decided by the IWG that the N-AWIPS NMAP software application should be used at RFCs east of Continental Divide until a uniform prototype tool meeting the collective NWS-wide QPF functionality requirements (RWP00059) of HPC, RFCs, and Weather Forecast Offices (WFOs), is delivered via AWIPS (Build 5.2). In the interim, Western Region (WR) will continue to use the WR-developed and supported Mountain Mapper application.

The limited functionality of HASQPF no longer meets the evolving needs of the RFCs and HASQPF is not nationally supported. The advantages of implementing NMAP as a local application at the nine RFCs east of Continental Divide are many and include:

- NMAP is the most resource-efficient means of meeting the critical RFC software needs for implementation of the modified QPF process (significant APO resources would be required over the next several months to resolve configuration management issues and adapt GFE for use at RFCs);
- NMAP is nationally-supported by NCEP/NCO and can easily be adapted for RFC use;
- The functionality of the product generation component of NMAP significantly exceeds the functionality of the currently utilized HASQPF application;
- Implementation of NMAP will ensure consistency between HPC and RFC product formats (i.e., VGF format);
- The NMAP editor/product generation tool can be directly initialized with HPC guidance;

- The final RFC QPF (VGF/grid) is viewable at HPC thereby facilitating coordination;
- NCEP/NCO has developed RedBook graphics driver and a utility to generate standard WMO/NWS GRIB bulletins; and
- The full functionality of the NMAP tool as an AWIPS local application is planned for late FY00 (NCEP/NCO plans to develop a translator to read AWIPS NETCDF files).

Based upon the thorough evaluation conducted by the IWG and their consensus selection of NMAP made on behalf of their Corporate Board representatives, the following critical implementation activities require your concurrence via email by December 15, 1999:

- APO will provide approval for RFCs to install the product generation component of NMAP as a local application on AWIPS;
- NCEP will provide the product generation component of NMAP for installation as a local application on AWIPS at the nine RFCs east of the Continental Divide;
- NCEP will continue to support and maintain the NMAP software and provide these nine RFCs upgrades as they become available (Regional IWG representatives have agreed to run the NCEP version of the NMAP software without local modification. Any RFC requests for software modifications will be coordinated through the HPC.);
- NCEP in coordination with OM, will provide NMAP training to at least one HAS forecaster from each of the nine affected RFCs;
- NCEP will provide the full host of GEMPAK executables necessary for GIF generation and grid post-processing; and
- NCEP will provide a test version of the NMAP software to the Arkansas Red Basin RFC (ABRFC) by January 5, 2000 (enabling integration work to commence).

Other associated activities planned by the IWG include:

- Bill Lawrence, the DOH at the ABRFC, will serve on behalf of OH as the RFC focal point and coordinate integration activities with NCEP.

- Regional IWG representatives from CR, ER, and SR have agreed to coordinate NMAP implementation activities with the Hydrologist-In-Charge (HIC) and their staffs at each RFC by January 5, 2000.
- Bill Lawrence will develop scripts which support the integration of NMAP with NWSRFS at each RFC east of the Continental Divide by January 31, 2000.
- OM and NCEP will develop an NMAP training plan by January 31, 2000 which will ensure RFC staffs are fully trained by May 1, 2000.
- OH will ensure that NMAP is fully functional at one RFC from each region (ABRFC, NERFC, and NCRFC) by March 30, 2000, and implemented at the remaining six RFCs by May 1, 2000.

Satisfying the above requests represents a significant step forward toward reaching our collective NWS FY00 Operating Plan milestone to implement the modified QPF process east of the Continental Divide by September 30, 2000. Thanks in advance for your support of these critical implementation activities.

cc:

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